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1 Specifically, content from a secondary content source 414 is selectively
2 interleaved with content from a primary content source 412 at an interleaving
3 multiplexor 700, to maintain the constant bit rate of transmission of a single
4 transport stream. (See col. 8, lines 8-9, and Fig. 4 of Mendelson).

5 If the respective primary buffer 450 or secondary buffer 460 is empty or
6 becomes empty, content is supplied from a stuffing content buffer 440 in order to
7 maintain the constant bit rate. (See col. 8, lines 13-16).

8 Interleaving multiplexor 700 receives content from primary content buffer
9 450, secondary content buffer 460, and/or stuffing buffer, places content in
10 respective buffers, and sequences buffered content into an interleaved transport
11 stream. (See col. 10, lines 1-18).

12 Claim 1 recites “variably buffering one of the time-based data stream and
13 the motion data stream to produce two streams having synchronized frames”. The
14 Office presents that Mendelson teaches this element particularly citing “multiple
15 elementary streams within a transport stream can be utilized (col. 4, lines 54-63,
16 col. 6, lines 4-8 of Mendelson)”. However, Mendelson describes the use of the
17 secondary content (which the Office presents as motion data) to be interleaved
18 with primary content so that the bit rate transmission of the primary content
19 remains constant. The buffering performed by Mendelson is specifically directed
20 to address providing the constant bit rate, not frame synchronization. The goal of a
21 constant bit rate transmission is further supported by the use of a stuffing buffer
22 which provides supplemental data to be interleaved if the primary content and
23 secondary content buffers are empty.

24 Mendelson does not teach or suggest that the either primary content (i.e.,
25 time-based data) or secondary content (i.e., motion-based data) may be buffered to

1 produce two streams of synchronized frames. For certain scenarios, Mendelson
2 may transmit the transport stream containing only primary content without any
3 secondary content (interleaved or otherwise). For example, if the primary content
4 is sufficient to transmit at the desired constant bit stream, there would be no need
5 to interleave the secondary content with the primary content – therefore no
6 secondary content is transmitted and only a stream containing primary content is
7 transmitted.

8 Accordingly, Mendelson does not teach every element of claim 1, and the
9 rejection of claim 1 is therefore improper. Accordingly, Applicants respectfully
10 request that the §103 rejection of claim 1 be withdrawn.

11 **Claims 8-10, 12-13** are allowable based at the least on their dependency on
12 claim 1. Accordingly, Applicants respectfully request that the §103 rejection of
13 claims 8-10, 12-13 be withdrawn.

14 **Independent claim 16** recites in part “a data stream synchronizer for
15 buffering one of the time-based data stream and the motion stream to produce two
16 streams having synchronized frames”. As discussed above, Mendelson is directed
17 to a video server that maintains a constant bit rate transmission of a single
18 transport stream, by interleaving when necessary secondary content data and/or
19 stuffing bit content with primary content. Mendelson does not teach or suggest the
20 buffering of one of the time-based data stream and motion data to produce two
21 streams of synchronized frames. Accordingly, the §103 rejection of claim 16 is
22 improper, and should be withdrawn.

1 Claim 3 is rejected under 35 U.S.C. §103(a) as being unpatentable over
2 Mendelson in view of U.S. Patent No. 5,642,171 to Baumgartner et al
3 (Baumgartner).

4 **Claim 3** depends from claim 1 and benefits from the arguments in support
5 of claim 1. Baumgartner is cited for teaching “a method whereby a current video
6 frame number is subtracted from a current audio frame number to determine if the
7 audio is too far ahead of the video”. However, Baumgartner provides no
8 suggestion of either primary content (i.e., time-based data) or secondary content
9 (i.e., motion-based data) may be buffered to produce two streams of synchronized
10 frames as recited by claim 1 from which claim 3 depends. Therefore, the
11 combination of these two references fails to teach or suggest the claim method.
12 Applicants respectfully request that the §103 rejection of claim 3 be withdrawn.

13 Claims 4, 14-15, 18 are rejected under 35 U.S.C. §103(a) as being
14 unpatentable over Mendelson in view of Shibata, Y., “Media Synchronization
15 Protocols for Packet Audio-Video System on Multimedia Information Networks”,
16 IEEE, January 3-6, 1995, pp. 594-601 (Shibata).

17 **Claim 4** depends from claim 1 and benefits from the arguments in support
18 of claim 1. Shibata is cited for teaching “a method whereby audio data is sent
19 from the video server to the client station only during a talk spurt, with constant
20 frame rates occurring during periods of audio silence”. However, Shibata provides
21 no suggestion of either primary content (i.e., time-based data) or secondary content
22 (i.e., motion-based data) may be buffered to produce two streams of synchronized
23 frames. Therefore, the combination of these two references, fail to teach or the
24 claimed method. Applicants respectfully request that the §103 rejection of claim 4
25 be withdrawn.

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2 **Independent claim 14** recites in part “storing a last data value for each
3 channel in each frame transmitted over the network; retrieving new synchronized
4 frames for transmission over the network; and packaging and transmitting over the
5 network only data for channels having changed data values”.

6 The Office argues that claim 14 incorporates substantially similar subject
7 matter as claim 1; however, claim 14 recites elements that are different than claim
8 1 which the Office has not addressed as being taught or suggested by Mendelson.
9 The Office specifically argues that Mendelson teaches “using streams with data
10 channels”; “a header packet, said header packet used to describe data within
11 transport stream data”. However, the Office does not point out where in
12 Mendelson it is taught or suggested the specific elements recited by claim 14 as to
13 “storing a last data value for each channel in each frame transmitted over the
14 network”; and “retrieving new synchronized frames for transmission over the
15 network”. The Office relies on Shibata as teaching “a method whereby audio data
16 is sent from the video server to the client station only during a talk spurt, with
17 constant frame rates occurring during periods of audio silence” which is different
18 than the element “transmitting over the network only data for channels having
19 changed data values”. In Shibata, the transmission occurs during a talk spurt,
20 regardless of whether data for channels have changed data values. In other words
21 the occurrence of a talk spurt in Shibata can transmit the same data values.

22 Accordingly, the combination of Mendelson and Shibata do not teach every
23 element of claim 14, and the rejection of claim 14 is therefore improper.
24 Accordingly, Applicants respectfully request that the §103 rejection of claim 14 be
25 withdrawn.

1 **Claim 15** is allowable based at the least on its dependency on claim 14.
2 Accordingly, Applicants respectfully request that the §103 rejection of claim 15 be
3 withdrawn.

4 **Claim 18** depends from claim 16 and benefits from the arguments in
5 support of claim 16. Shibata is cited for teaching “a method whereby audio data is
6 sent from the video server to the client station only during a talk spurt, with
7 constant frame rates occurring during periods of audio silence”. However, Shibata
8 provides no suggestion of “buffering of one of the time-based data stream and
9 motion data to produce two streams of synchronized frames”. Therefore, the
10 combination of these two references, fail to teach or suggest the claimed apparatus.
11 Applicants respectfully request that the §103 rejection of claim 18 be withdrawn.

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13 **Claim 5** is rejected under 35 U.S.C. §103(a) as being unpatentable over
14 Mendelson in view of U.S. Patent No. 5,822,537 to Katseff et al (Katseff).

15 **Claim 5** depends from claim 1 and benefits from the arguments in support
16 of claim 1. Katseff is cited for teaching “a method whereby audio data is sent
17 from the video server to the client station only during a talk spurt, with constant
18 frame rates occurring during periods of audio silence”. However, Shibata provides
19 no suggestion of either primary content (i.e., time-based data) or secondary content
20 (i.e., motion-based data) may be buffered to produce two streams of synchronized
21 frames. Therefore, the combination of these two references, fail to suggest the
22 claimed method. Applicants respectfully request that the §103 rejection of claim 5
23 be withdrawn.

1 Claims 6, 7, 11, 17, 19 are rejected under 35 U.S.C. §103(a) as being
2 unpatentable over Mendelson in view of U.S. Patent No. 5,950, 202 to Durward et
3 al (Durward).

4 **Claims 6, 7, 11** depend from claim 1 and benefit from the arguments in
5 support of claim 1. Durward is cited for teaching “a method whereby updated
6 positional data from a person’s head position sensor is mapped and used to
7 determine the position of a virtual being defined for that user, communicating
8 graphical data to the user via database data”. However, Durward provides no
9 suggestion of either primary content (i.e., time-based data) or secondary content
10 (i.e., motion-based data) may be buffered to produce two streams of synchronized
11 frames. Therefore, the combination of these two references, fail to teach or
12 suggest the claimed methods. Applicants respectfully request that the §103
13 rejection of claim 6, 7, 11 be withdrawn.

14 **Claim 17** depends from claim 16 and benefits from the arguments in
15 support of claim 16. Durward is cited for teaching “a method whereby updated
16 positional data from a person’s head position sensor is mapped and used to
17 determine the position of a virtual being defined for that user, communicating
18 graphical data to the user via database data”. However, Durward provides no
19 suggestion of “buffering of one of the time-based data stream and motion data to
20 produce two streams of synchronized frames”. Therefore, the combination of
21 these two references, fail to teach or suggest the claimed apparatus. Applicants
22 respectfully request that the §103 rejection of claim 17 be withdrawn.

23 **Independent claim 19** recites in part “mapping the motion based data to
24 control the movement of a virtual figure in a scene displayed at a client; and
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1 playing back in synchronization with movement of the virtual figure the time-
2 based data”.

3 The Office argues that claim 19 incorporates substantially similar subject
4 matter as claim 1; however, claim 19 recites elements that are different than claim
5 1 which the Office has not addressed as being taught or suggested by Mendelson.
6 The Office specifically argues that Mendelson teaches “secondary data as stuffing
7 data, or as private data such as files or databases”. However, the Office does not
8 point out where in Mendelson it is taught or suggested the specific element recited
9 by claim 19 as to “playing back in synchronization with movement of the virtual
10 figure the time-based data”. The Office admits that Mendelson does not teach
11 “motion data mapped to control movement of a virtual figure displayed in a scene
12 at a client”, and relies on Durward as teaching “a method whereby updated
13 positional data from a person’s head position sensor is mapped and used to
14 determine the position of a virtual being defined for that user, communicating
15 graphical data to the user via database data”. However, Durward provides no
16 suggestion of “playing back in synchronization with movement of the virtual
17 figure the time-based data”.

18 The combination of Mendelson and Durward do not teach every element of
19 claim 19, and the rejection of claim 19 is therefore improper. Accordingly,
20 Applicants respectfully request that the §103 rejection of claim 19 be withdrawn.
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22 Claim 20 is rejected under 35 U.S.C. §103 as being unpatentable over
23 Mendelson, Baumgartner, and Durward.

24 **Independent claim 20** recites in part “calculating a delay through the
25 server for a frame of data on each of the streams; calculating a difference between

1 the delay for the audio stream and the motion data stream to determine which of
2 the two streams is faster; and variably buffering a faster of the streams to
3 synchronize the audio stream and the motion data stream resulting in two output
4 streams having synchronized data frames”.

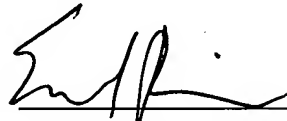
5 The Office argues that claim 20 incorporates substantially similar subject
6 matter as claims 1, 3, 10, 11; however, claim 20 recites elements that are different
7 than claims 1, 3, 10, 11 which the Office has not addressed as being taught or
8 suggested by Mendelson. In specific, the Office does not address where in
9 Mendelson, or any other references the following elements are taught or suggested:
10 “calculating a delay through the server for a frame of data on each of the streams;
11 calculating a difference between the delay for the audio stream and the motion data
12 stream to determine which of the two streams is faster”. Furthermore, claim 20
13 recites “variably buffering a faster of the streams to synchronize the audio stream
14 and the motion data stream resulting in two output streams having synchronized
15 data frames”. As discussed above, Mendelson is directed to a video server that
16 maintains a constant bit rate transmission of a single transport stream, by
17 interleaving when necessary secondary content data and/or stuffing bit content
18 with primary content. Mendelson does not teach or suggest “variably buffering a
19 faster of the streams to synchronize the audio stream and the motion data stream
20 resulting in two output streams having synchronized data frames”. The
21 combination of Mendelson, Baumgartner, and Durward do not teach every element
22 of claim 20, and the rejection of claim 20 is therefore improper. Accordingly,
23 Applicants respectfully request the §103 rejection of claim 20 be withdrawn.
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1 **CONCLUSION**

2 All pending claims 1, 3-20 are in condition for allowance. Applicant
3 respectfully requests reconsideration and prompt issuance of the subject
4 application. If any issues remain that prevent issuance of this application, the
5 Examiner is urged to contact the undersigned attorney before issuing a subsequent
6 Action.

7
8 Respectfully Submitted,

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10 Dated: 9/20/04

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